1.485 Gb/s HD 6 O/P
Reclocking Distribution Amplifier
Type HDA-4510

BLOCK DIAGRAM HDA-4510 SIGNAL PATH

Relay RL 1 = Output Alarm
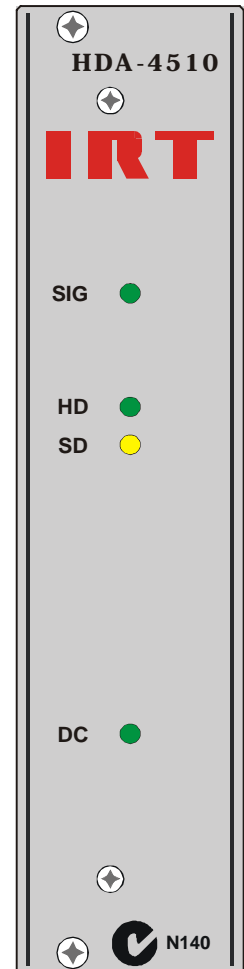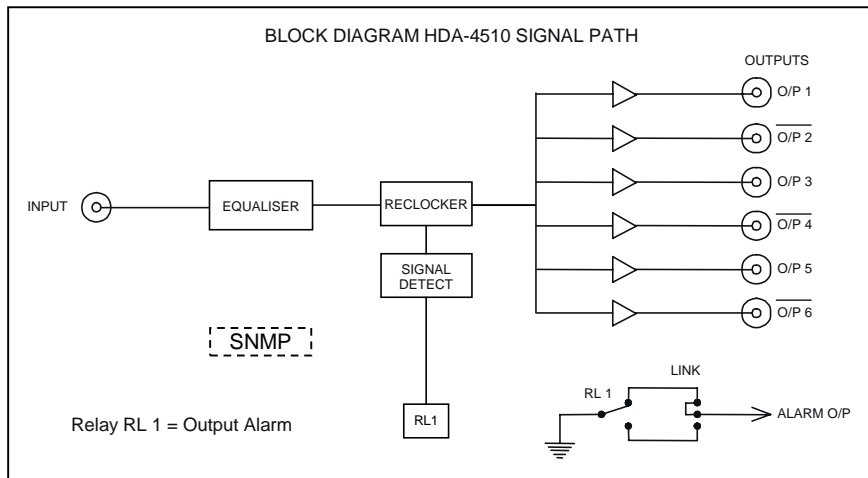
Features:

- **Automatic selection of either High Definition or Standard Definition digital signals**
- **6 reclocked outputs**
- **Automatic input equalisation**
- **Locked signal presence LED and external relay alarm contact**
- **Optional plug-in SNMP monitoring module.**

General:

The HDA-4510 1.485 Gb/s serial digital video reclocking distribution amplifier provides the user with a single standard module to cover a wide range of distribution and monitoring functions for High Definition (HD) digital signals.

As well as accepting an HD signal, the HDA-4510 will also accept Standard Definition (SD) rates such as SDI. ASI is also possible, however as three of the six outputs are inverted only the non-inverted output ports are suitable for ASI.

Serial digital signals suffer severe deterioration over relatively short cable distances. This is especially so with the HD high data rate. The HDA-4510 provides a means of extending the working distances that can be achieved by equalising and re-transmitting the data mid route.

The HDA-4510 will automatically reclock either a 1.485 Gb/s HD signal or a lower rate SD signal and automatically adjust the output driver slew rate to suit.

Front panel LEDs indicate when an input signal is present and also whether it is either an HD or SD type of signal.

A relay alarm output, with a selectable N/O or N/C switch to ground contact, is available for indication of loss of input signal or loss of power.

An optional SNMP (Simple Network Management Protocol) plug in module is available for remote monitoring when used in conjunction with IRT's 4000 series frame fitted with SNMP capability.

The HDA-4510 is designed to fit IRT's 4000 series frame for use with IRT's SNMP system as well as being suitable with IRT's Standard 1000 and 3000 series Eurocard frames and may be used alongside any other of IRT's analogue or digital Eurocards.

HDA-4510 Technical Specifications

Input:
Number   1.
Type   1.485 Gb/s High Definition, or
                              270 Mb/s Standard Definition.
Impedance   75 Ohm.
Return loss[*]   >20 dB 5 MHz to 270 MHz, >15 dB to 1.485Gb/s.
Equalisation   Automatic, >250 metres at 270 Mb/s, >100 metres at 1.485 Gb/s
                              for Belden 8281 or equivalent cable.

Outputs:
Number   6 HD or SD, output slew rate automatically selected.
Signal level   800 mV ± 10%
Impedance   75 Ohm.
Return loss[*]   >20 dB 5 MHz to 270 MHz, >15 dB to 1.485Gb/s.
DC offset   Nil.

Performance:
Output rise time   <200 ns, (180 ns typically).
Residual Jitter   <0.15 UI at 1.485 Gb/s (measured with up to 100m of Belden 8281 or
                              equivalent cable)

Connectors: BNC.

Indicators:
Power   LED (green) for +5 Vdc.
Signal present   LED (green) when signal present.
HD   LED (green) when input signal is 1.485 Gb/s HD.
SD   LED (yellow) when output signal is 270, 360 or 540 Mb/s SD.

Power requirement:
Voltage   28 Vac CT (14-0-14) or ±16 Vdc
Consumption   4.0 VA.

General:
Temperature range   0 - 50° C ambient
Mechanical   Suitable for mounting in IRT 19" rack chassis with input, output and power connections on the
                              rear panel.
Dimensions   6 HP x 3U Extended Eurocard (220 mm x 100 mm).
Weight   With rear assembly 385g.
Finish: Front panel   Grey background, silk-screened black lettering & red IRT logo
         Rear assembly   Detachable silk-screened PCB with direct mount connectors to Eurocard and external signals

Supplied accessories   Rear connector assembly with matching connector for alarm outputs.
Optional accessories   SMU-4000 SNMP plug-in module for use with 4000 series frame fitted with SNMP "Agent"

* Note: When mounted in an IRT 1000 or 4000 series frame.
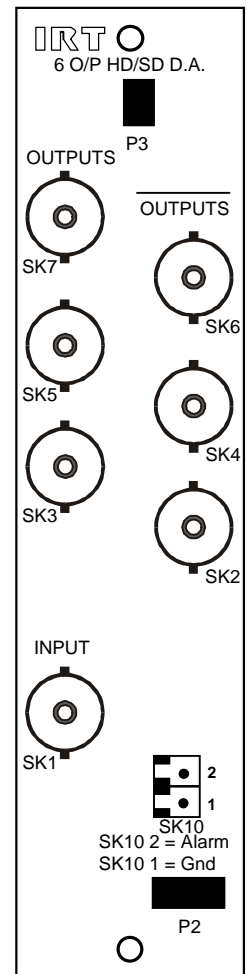
Due to our policy of continuing development, these specifications are subject to change without notice.

Detailed specifications available from:

Manufacturer: **Local Agent:**   **IRT can be found on the Internet at:**

IRT Electronics Pty Ltd   **http://www.irtelectronics.com**

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IRT
6 O/P HD/SD D.A.
P3
OUTPUTS
OUTPUTS
SK7
SK6
SK5
SK4
SK3
SK2
INPUT
SK1
2
1
SK10
SK10 2 = Alarm
SK10 1 = Gnd
P2